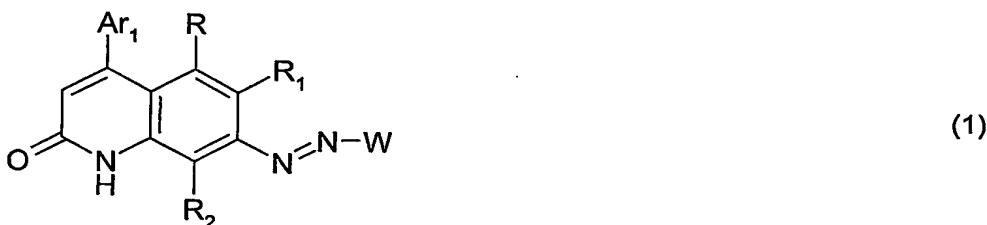


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What is claimed is:

1. A monoazoquinolone pigment which, in one of its tautomeric forms, corresponds to formula



wherein

W is unsubstituted or substituted C<sub>6</sub>-C<sub>24</sub>aryl or unsubstituted or substituted heteroaryl or is a radical of formula



wherein

Ar<sub>2</sub> is unsubstituted or substituted C<sub>6</sub>-C<sub>24</sub>aryl or unsubstituted or substituted heteroaryl,  
Ar<sub>1</sub> is unsubstituted or substituted C<sub>6</sub>-C<sub>24</sub>aryl or unsubstituted or substituted heteroaryl,  
R, R<sub>1</sub> and R<sub>2</sub> are each independently of the others hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, halogen, cyano, CF<sub>3</sub>, nitro, NR<sub>3</sub>R<sub>4</sub>, COOR<sub>4</sub>, NR<sub>4</sub>COR<sub>3</sub>, COO<sup>-</sup>X<sup>+</sup>, COR<sub>4</sub>, OR<sub>4</sub>, SR<sub>3</sub>, SO<sub>2</sub>R<sub>3</sub>, SO<sub>2</sub>NR<sub>3</sub>R<sub>4</sub>, SO<sub>3</sub><sup>-</sup>X<sup>+</sup>, or C<sub>6</sub>-C<sub>24</sub>aryl which is unsubstituted or mono- or poly-substituted by R<sub>5</sub>,

R<sub>3</sub> is C<sub>1</sub>-C<sub>6</sub>alkyl, or C<sub>6</sub>-C<sub>12</sub>aryl which is unsubstituted or mono- or poly-substituted by halogen, hydroxy, OR<sub>7</sub>, cyano, nitro, SR<sub>7</sub>, NR<sub>6</sub>R<sub>7</sub>, COOR<sub>7</sub>, CONR<sub>6</sub>R<sub>7</sub>, NR<sub>6</sub>COR<sub>7</sub>, NR<sub>6</sub>COOR<sub>7</sub>, COO<sup>-</sup>X<sup>+</sup>, COR<sub>4</sub>, OR<sub>4</sub>, SO<sub>2</sub>R<sub>7</sub>, SO<sub>2</sub>NR<sub>6</sub>R<sub>7</sub>, SO<sub>3</sub><sup>-</sup>X<sup>+</sup> or by SO<sub>3</sub>R<sub>7</sub>,

R<sub>4</sub> is hydrogen or has the meanings of R<sub>3</sub>,

R<sub>5</sub> is hydrogen, C<sub>1</sub>-C<sub>4</sub>alkyl, halogen, nitro, NR<sub>7</sub>R<sub>8</sub> or OR<sub>7</sub>,

R<sub>6</sub> is hydrogen or C<sub>1</sub>-C<sub>3</sub>alkyl,

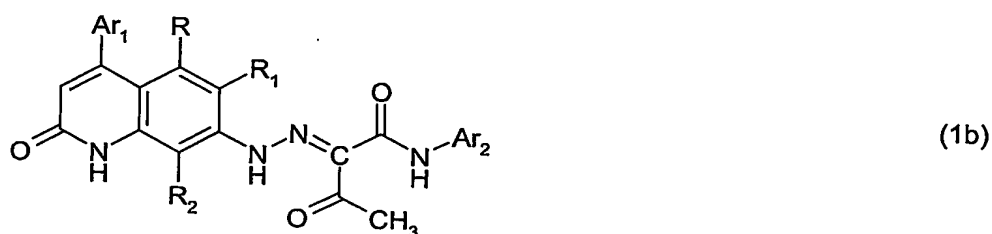
R<sub>7</sub> and R<sub>8</sub> are each independently of the other hydrogen; C<sub>1</sub>-C<sub>3</sub>alkyl; phenyl which is unsubstituted or mono- or poly-substituted by halogen, nitro, OR<sub>5</sub>, NR<sub>16</sub>R<sub>17</sub>; or benzyl which is unsubstituted or mono- or poly-substituted by halogen, nitro, OR<sub>5</sub>, NR<sub>16</sub>R<sub>17</sub>, and

X<sup>+</sup> is a cation H<sup>+</sup>, Li<sup>+</sup>, Na<sup>+</sup>, K<sup>+</sup>, Mg<sup>++</sup><sub>1/2</sub>, Ca<sup>++</sup><sub>1/2</sub>, Sr<sup>++</sup><sub>1/2</sub>, Ba<sup>++</sup><sub>1/2</sub>, Cu<sup>+</sup>, Cu<sup>++</sup><sub>1/2</sub>, Zn<sup>++</sup><sub>1/2</sub>, Mn<sup>++</sup><sub>1/2</sub>, Al<sup>+++</sup><sub>1/3</sub> or [NR<sub>9</sub>R<sub>10</sub>R<sub>11</sub>R<sub>12</sub>]<sup>+</sup>, wherein R<sub>9</sub>, R<sub>10</sub>, R<sub>11</sub> and R<sub>12</sub> are each independently of the others

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hydrogen; C<sub>1</sub>-C<sub>6</sub>alkyl; phenyl which is unsubstituted or mono- or poly-substituted by C<sub>1</sub>-C<sub>6</sub>alkyl, halogen, nitro, OR<sub>5</sub>, NR<sub>16</sub>R<sub>17</sub>; or benzyl which is unsubstituted or mono- or poly-substituted by C<sub>1</sub>-C<sub>6</sub>alkyl, halogen, nitro, OR<sub>5</sub>, NR<sub>16</sub>R<sub>17</sub>, and R<sub>16</sub> and R<sub>17</sub> are each independently of the other hydrogen or C<sub>1</sub>-C<sub>6</sub>alkyl.

2. A monoazoquinolone pigment according to claim 1, of formula



wherein

Ar<sub>1</sub> and Ar<sub>2</sub> are each independently of the other unsubstituted or substituted C<sub>6</sub>-C<sub>24</sub>aryl or unsubstituted or substituted heteroaryl,

R, R<sub>1</sub> and R<sub>2</sub> are each independently of the others hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, halogen, cyano, CF<sub>3</sub>, nitro, NR<sub>3</sub>R<sub>4</sub>, COOR<sub>4</sub>, NR<sub>4</sub>COR<sub>3</sub>, COO<sup>-</sup>X<sup>+</sup>, COR<sub>4</sub>, OR<sub>4</sub>, SR<sub>3</sub>, SO<sub>2</sub>R<sub>3</sub>, SO<sub>2</sub>NR<sub>3</sub>R<sub>4</sub>, SO<sub>3</sub><sup>-</sup>X<sup>+</sup>, or C<sub>6</sub>-C<sub>24</sub>aryl which is unsubstituted or mono- or poly-substituted by R<sub>5</sub>,

R<sub>3</sub> is C<sub>1</sub>-C<sub>6</sub>alkyl, or C<sub>6</sub>-C<sub>12</sub>aryl which is unsubstituted or mono- or poly-substituted by halogen, hydroxy, OR<sub>7</sub>, cyano, nitro, SR<sub>7</sub>, NR<sub>6</sub>R<sub>7</sub>, COOR<sub>7</sub>, CONR<sub>6</sub>R<sub>7</sub>, NR<sub>6</sub>COR<sub>7</sub>, NR<sub>6</sub>COOR<sub>7</sub>, COO<sup>-</sup>X<sup>+</sup>, COR<sub>4</sub>, OR<sub>4</sub>, SO<sub>2</sub>R<sub>7</sub>, SO<sub>2</sub>NR<sub>6</sub>R<sub>7</sub>, SO<sub>3</sub><sup>-</sup>X<sup>+</sup> or by SO<sub>3</sub>R<sub>7</sub>,

R<sub>4</sub> is hydrogen or has the meanings of R<sub>3</sub>,

R<sub>5</sub> is hydrogen, C<sub>1</sub>-C<sub>4</sub>alkyl, halogen, nitro, NR<sub>7</sub>R<sub>8</sub> or OR<sub>7</sub>,

R<sub>6</sub> is hydrogen or C<sub>1</sub>-C<sub>3</sub>alkyl,

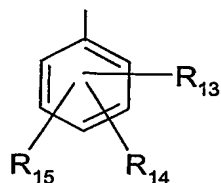
R<sub>7</sub> and R<sub>8</sub> are each independently of the other hydrogen; C<sub>1</sub>-C<sub>3</sub>alkyl; phenyl which is unsubstituted or mono- or poly-substituted by halogen, nitro, OR<sub>5</sub>, NR<sub>16</sub>R<sub>17</sub>; or benzyl which is unsubstituted or mono- or poly-substituted by halogen, nitro, OR<sub>5</sub>, NR<sub>16</sub>R<sub>17</sub>, and

X<sup>+</sup> is a cation H<sup>+</sup>, Li<sup>+</sup>, Na<sup>+</sup>, K<sup>+</sup>, Mg<sup>++</sup><sub>1/2</sub>, Ca<sup>++</sup><sub>1/2</sub>, Sr<sup>++</sup><sub>1/2</sub>, Ba<sup>++</sup><sub>1/2</sub>, Cu<sup>+</sup>, Cu<sup>++</sup><sub>1/2</sub>, Zn<sup>++</sup><sub>1/2</sub>, Mn<sup>++</sup><sub>1/2</sub>, Al<sup>+++</sup><sub>1/3</sub> or [NR<sub>9</sub>R<sub>10</sub>R<sub>11</sub>R<sub>12</sub>]<sup>+</sup>, wherein R<sub>9</sub>, R<sub>10</sub>, R<sub>11</sub> and R<sub>12</sub> are each independently of the others hydrogen; C<sub>1</sub>-C<sub>6</sub>alkyl; phenyl which is unsubstituted or mono- or poly-substituted by C<sub>1</sub>-C<sub>6</sub>alkyl, halogen, nitro, OR<sub>5</sub>, NR<sub>16</sub>R<sub>17</sub>; or benzyl which is unsubstituted or mono- or poly-substituted by C<sub>1</sub>-C<sub>6</sub>alkyl, halogen, nitro, OR<sub>5</sub>, NR<sub>16</sub>R<sub>17</sub>, and

R<sub>16</sub> and R<sub>17</sub> are each independently of the other hydrogen or C<sub>1</sub>-C<sub>6</sub>alkyl.

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3. A monoazoquinolone pigment according to either claim 1 or claim 2, wherein Ar<sub>1</sub> is a radical of formula

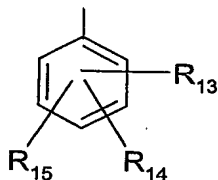


(2)

wherein

R<sub>13</sub>, R<sub>14</sub> and R<sub>15</sub> are each independently of the others hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, halogen, cyano, CF<sub>3</sub>, nitro, NR<sub>3</sub>R<sub>4</sub>, COOR<sub>4</sub>, NR<sub>4</sub>COR<sub>3</sub>, COO<sup>-</sup>X<sup>+</sup>, COR<sub>4</sub>, OR<sub>4</sub>, SR<sub>3</sub>, SO<sub>2</sub>R<sub>3</sub>, SO<sub>2</sub>NR<sub>3</sub>R<sub>4</sub>, SO<sub>3</sub>R<sub>4</sub>, SO<sub>3</sub><sup>-</sup>X<sup>+</sup>, or C<sub>6</sub>-C<sub>12</sub>aryl which is unsubstituted or mono- or poly-substituted by R<sub>5</sub>.

4. A monoazoquinolone pigment according to either claim 2 or claim 3, wherein Ar<sub>2</sub> is a radical of formula



(2)

wherein

R<sub>13</sub>, R<sub>14</sub> and R<sub>15</sub> are each independently of the others hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, halogen, cyano, CF<sub>3</sub>, nitro, NR<sub>3</sub>R<sub>4</sub>, COOR<sub>4</sub>, NR<sub>4</sub>COR<sub>3</sub>, COO<sup>-</sup>X<sup>+</sup>, COR<sub>4</sub>, OR<sub>4</sub>, SR<sub>3</sub>, SO<sub>2</sub>R<sub>3</sub>, SO<sub>2</sub>NR<sub>3</sub>R<sub>4</sub>, SO<sub>3</sub>R<sub>4</sub>, SO<sub>3</sub><sup>-</sup>X<sup>+</sup>, or C<sub>6</sub>-C<sub>12</sub>aryl which is unsubstituted or mono- or poly-substituted by R<sub>5</sub>.

5. A monoazoquinolone pigment according to any one of claims 1 to 4, wherein R<sub>1</sub> and R<sub>2</sub> are each independently of the other hydrogen, C<sub>1</sub>-C<sub>3</sub>alkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, chlorine, COOR<sub>5</sub>, NR<sub>4</sub>COR<sub>3</sub>, COO<sup>-</sup>X<sup>+</sup> or SO<sub>3</sub><sup>-</sup>X<sup>+</sup>, R<sub>5</sub> is hydrogen or C<sub>1</sub>-C<sub>3</sub>alkyl and X<sup>+</sup> is a cation Na<sup>+</sup>, Mg<sup>++</sup><sub>1/2</sub>, Ca<sup>++</sup><sub>1/2</sub>, Sr<sup>++</sup><sub>1/2</sub>, Ba<sup>++</sup><sub>1/2</sub> or [NR<sub>9</sub>R<sub>10</sub>R<sub>11</sub>R<sub>12</sub>]<sup>+</sup>, wherein R<sub>9</sub>, R<sub>10</sub>, R<sub>11</sub> and R<sub>12</sub> are each independently of the others hydrogen; C<sub>1</sub>-C<sub>6</sub>alkyl; phenyl which is unsubstituted or mono- or poly-substituted by C<sub>1</sub>-C<sub>3</sub>alkyl, halogen, nitro, OR<sub>7</sub>, N(R<sub>7</sub>)<sub>2</sub>; or benzyl which is unsubstituted or mono- or poly-substituted by C<sub>1</sub>-C<sub>3</sub>alkyl, halogen, nitro, OR<sub>7</sub>, N(R<sub>7</sub>)<sub>2</sub>.

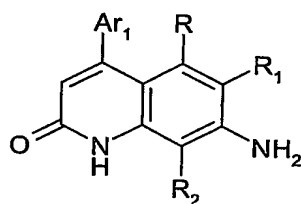
6. A monoazoquinolone pigment according to any one of claims 1 to 4, wherein R<sub>1</sub> and R<sub>2</sub> are each independently of the other hydrogen, C<sub>1</sub>-C<sub>2</sub>alkyl, C<sub>1</sub>-C<sub>2</sub>alkoxy, chlorine, COOR<sub>5</sub>, NR<sub>4</sub>COR<sub>3</sub>, COO<sup>-</sup>X<sup>+</sup> or SO<sub>3</sub><sup>-</sup>X<sup>+</sup>, R<sub>5</sub> is hydrogen or C<sub>1</sub>-C<sub>2</sub>alkyl and X<sup>+</sup> is a cation Na<sup>+</sup>, Mg<sup>++</sup><sub>1/2</sub>,

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$\text{Ca}^{++}_{1/2}$ ,  $\text{Sr}^{++}_{1/2}$ ,  $\text{Ba}^{++}_{1/2}$  or  $[\text{NR}_9\text{R}_{10}\text{R}_{11}\text{R}_{12}]^+$ , wherein  $\text{R}_9$ ,  $\text{R}_{10}$ ,  $\text{R}_{11}$  and  $\text{R}_{12}$  are each independently of the others hydrogen,  $\text{C}_1\text{-C}_6$ alkyl, phenyl which is unsubstituted or mono- or poly-substituted by  $\text{C}_1\text{-C}_2$ alkyl and/or by halogen, or benzyl which is unsubstituted or mono- or poly-substituted by  $\text{C}_1\text{-C}_2$ alkyl and/or by halogen.

7. A monoazoquinolone pigment according to claim 6, wherein  $\text{R}_1$  and  $\text{R}_2$  are each independently of the other hydrogen,  $\text{C}_1\text{-C}_2$ alkyl,  $\text{C}_1\text{-C}_2$ alkoxy, chlorine,  $\text{COOR}_5$  or  $\text{NR}_4\text{COR}_3$  and  $\text{R}_5$  is hydrogen or  $\text{C}_1\text{-C}_2$ alkyl.

8. A process for the preparation of a monoazoquinolone pigment of formula (1) according to claim 1, wherein a compound of formula



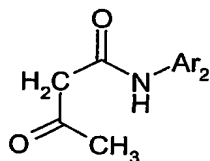
(50)

is diazotised and coupled to a compound of formula

W-H

(51)

or to a compound of formula



(51a),

wherein  $\text{Ar}_1$ , W, R,  $\text{R}_1$  and  $\text{R}_2$  are as defined for formula (1) in claim 1 and  $\text{Ar}_2$  is as defined for formula (1a) in claim 1.

9. The use of a monoazoquinolone pigment according to claim 1 in the colouring of high molecular weight material.

10. The use of a monoazoquinolone pigment according to claim 1 as a colourant for plastics, surface coatings or printing inks.

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11. The use of a monoazoquinolone pigment according to claim 1 as a colourant in the production of colour filters.